

REMARKS

No new matter has been added.

The Examiner is requested to call the undersigned if any questions arise concerning the above-mentioned application.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification**Page 1, starting at line 16**

This application relates to the following U.S. patent applications, all commonly assigned to the assignee of this application.

Serial No.	Atty. Dkt. No.	Title	Filed
<u>09/676,147</u>	2705-128	Fully Distributed, Scalable [Interface] <u>Infrastructure</u> , Communication System	<u>09/29/00</u>
<u>09/698,779</u>	2705-137	Smart Secretary	<u>10/27/00</u>
<u>09/711,378</u>	2705-139	Replication of a Scalable [Interface] <u>Infrastructure</u> System	<u>11/09/00</u>
<u>09/695,750</u>	2705-140	Object Agents in a Scalable [Interface] <u>Infrastructure</u> System	<u>10/24/00</u>
<u>09/746,798</u>	2705-141	[Memory Management of] <u>Address Services</u> in a Scalable [Interface] <u>Infrastructure</u> Communication System	<u>12/20/00</u>
<u>09/694,740</u>	2705-142	Interconnective Agents in a Scalable [Interface] <u>Infrastructure</u> System	<u>10/23/00</u>
<u>09/713,155</u>	2705-143	[Multicasting and Joining] <u>Conference Calling</u> in a Scalable [Interface] <u>Infrastructure</u> System	<u>11/14/00</u>
<u>09/697,821</u>	2705-144	[Scalable Interface Community Service] <u>Method of Managing a Scalable Infrastructure</u> <u>Communication System</u>	<u>10/26/00</u>

Page 1, line 20**FIELD**

This invention pertains to object routing and, more particularly, to object routing in a Scalable [Interface]Infrastructure system.

The paragraph starting on page 2, line 19, has been amended as follows:

To enable users to electronically "lurk" to a colleague's office or other location, a Scalable [Interface]Infrastructure system is employed. A network receiving agent is responsible for determining a user's availability, as well as the devices in the user's office over which colleagues can contact the user. A network lurking agent, invoked by a user wishing to visit a colleague, makes an inquiry of the network receiving agent to determine whether the colleague is available and, if the colleague is available, which devices can be used to contact the colleague. The network receiving agent and network lurking agent can then open communications between the user and his colleague.

The paragraph starting on page 3, line 21, has been amended as follows:

In FIG. 1, computer system 105 is connected to network 130 via network connection 135. A Scalable [Interface]Infrastructure system for use in distributed communication systems as described in U.S. Patent Application Serial No. [_____,]09/676,147, titled "Fully Distributed, Scalable [Interface]Infrastructure, Communication System," filed [_____,]September 29, 2000, operates over network 130. The network receiving agent and network lurking agent, either or both running on computer system 105, are part of the Scalable [Interface]Infrastructure system. The following material is drawn from U.S. Patent Application Serial No. [_____,]09/676,147, titled "Fully Distributed, Scalable [Interface]Infrastructure, Communication System," filed [_____,]September 20, 2000:

The paragraph starting on page 3, line 7, has been amended as follows:

FIG. 5 shows a network receiving agent and a network lurking agent according to the preferred embodiments operating over a Space in a Scalable [Interface] Infrastructure system.

The paragraph starting on page 3, line 29, has been amended as follows:

The Scalable [Interface]Infrastructure system uses a combination of a persistent store and agents to provide a communication system extensible to nearly all types of interfaces and any number of users and applications. The Scalable [Interface]Infrastructure system defines Communities around the persistent store, or Space, with Space or non-Space oriented interpreters, referred to here as Double Agents. Double Agents will be discussed in more detail further.

The paragraph starting on page 4, line 4, has been amended as follows:

A Community as used here will refer to a collection of these agents and a persistent store. Any type of persistent store could be used, with the capabilities of having objects inserted into the store such that they do not lose their attributes and of providing a notification service as the objects are inserted. In this particular example, JavaSpaces™ technology will be used as the persistent stores, but the Scalable [Interface]Infrastructure system is applicable to any similar technology. For ease of discussion, the persistent stores will be referred to as "Spaces." Spaces can be used in several different implementations, and the following discussion is meant only as an example.

The paragraph starting on page 6, line 13, has been amended as follows:

FIG. 4 shows a user's office, over which a network receiving agent according to the preferred embodiment of the invention can operate. In FIG. 4, network receiving agent 205 is coupled to Space 405, which is part of the Scalable [Interface]Infrastructure system described above with reference to FIG. 1. Network receiving agent 205 is also connected to office 410. Recall that in the preferred embodiment, the office is represented as a URL. The URL is used when a network lurking agent is attempting to "lurk" by office 410. But network receiving agent 205 also receives sensor information from office 410 about devices in office 410, and about whether the user is in office 410. For example, in office 410, telephone 415 and video camera 420 can be seen. Network receiving agent 205 receives information from these devices as to whether they are operational and in use. For example, if video camera 420 is non-functional, network receiving agent 205 knows that the user cannot be contacted using video camera 420. Similarly, if the user is on one line of telephone 415, network receiving agent 205 knows that the user cannot be reached via that line of telephone 415 for a private conversation. But network receiving agent 205 also knows that, if the conversation permits it, a third party can join the conversation on that line of telephone 415. Eventually, when the user hangs up, telephone 415 informs network receiving agent 205 that all lines are available on telephone 415.

The paragraph starting on page 7, , line 26, has been amended as follows:

Network receiving agent 205 stores the information received from devices in office 410 in environment setting 220. Environment setting 220 is stored in Space 405 within the Scalable [Interface]Infrastructure system. As network receiving agent 205 receives new sensor input from office 410, network receiving agent 205 can update environment setting 220.

The paragraph starting on page 8, line 15, has been amended as follows:

FIG. 5 shows a network receiving agent and a network lurking agent according to the preferred embodiments operating over a Space in a Scalable [Interface]Infrastructure system. In FIG. 5, a user in office 505 uses network lurking agent 305 to attempt to contact a colleague in office 410. Recall that in the preferred embodiment, the lurker software includes a web browser, and an office or other location is represented as a URL. The user in office 505 lurks by entering a URL for an office the user wishes to visit. For example, to visit John Doe's office, the user might enter <<http://www.company.com/JDoe.office>> as the URL.

Network lurking agent 305 places inquiry 510 in Space 405 to inquire as to the availability of the user in office 410. Space 405 notifies network receiving agent 205 about inquiry 510, which then takes inquiry 510 from Space 405. Network receiving agent 205 checks environment setting 220 to see if the user is in office 410. If the user is in office 410, then network receiving agent 205 and network lurking agent 305 activate available devices in the respective offices, opening communications between the users. (Communication is achieved through objects being dropped in Space 405 by the double agent for each device, the objects destined for the double agent for the other device.) For example, in FIG. 5, network receiving agent 205 and network lurking agent 305 can ring telephones 415 and 515, respectively. Once each user picks up, they are in communication.

In the Claims

1. A network receiving agent operable in a Scalable [Interface]Infrastructure system, the network receiving agent comprising:

a sensor designed to receive information about an environment;

an environment setting describing the status of a device in the environment; and

an updater designed to update the environment setting based on data input to the sensor.

11. A network lurking agent operable in a Scalable [Interface]Infrastructure system, the network lurking agent comprising:

a lurker designed to visit an environment within the Scalable [Interface]Infrastructure system; and

an inquirer designed to inquire as to the availability of a device in the environment.

14. A Scalable [Interface]Infrastructure system designed to support network lurking, the Scalable [Interface]Infrastructure system comprising:

a network receiving agent designed to receive an inquiry about the availability of a device in an environment; and

a network lurking agent designed to send the inquiry to the network receiving agent.

15. A Scalable [Interface]Infrastructure system according to claim 14, wherein the network lurking agent is designed to place the inquiry in a Space in the Scalable [Interface]Infrastructure system.

16. A Scalable [Interface]Infrastructure system according to claim 15, wherein the Scalable [Interface]Infrastructure system notifies the network receiving agent about the inquiry when the network lurking agent places the inquiry in the Space.

17. A Scalable [Interface]Infrastructure system according to claim 14, wherein the network receiving agent is designed to store an environment setting in a Space in the Scalable [Interface]Infrastructure system.

18. A Scalable [Interface]Infrastructure system according to claim 14, wherein the network receiving agent and the network lurking agent are designed to open devices as a result of the inquiry, the devices enabling communication.

19. A Scalable [Interface]Infrastructure system according to claim 14, wherein;
the network lurking agent is designed to send a message when the inquiry is refused;
and

the network receiver is designed to refuse the inquiry and to receive the message from the network lurking agent.

20. A method for using a network receiving agent to update an environment setting in a Scalable [Interface]Infrastructure system, the method comprising:

receiving sensor input from a device in an environment; and
updating the environment setting based on the sensor input.

24. A computer-readable medium containing a program to use a network receiving agent to update an environment setting in a Scalable [Interface]Infrastructure system on a computer system, the program being executable on the computer system to implement the method of claim 20.

25. A method for using a network lurking agent to electronically lurk to an environment in a Scalable [Interface]Infrastructure system, the method comprising:

lurking to the environment; and

inquiring as to the availability of the environment.

32. An apparatus for using a network receiving agent to update an environment setting in a Scalable [Interface]Infrastructure system, the apparatus comprising:

means for receiving sensor input from a device in an environment; and

means for updating the environment setting based on the sensor input.

36. An apparatus for using a network lurking agent to electronically lurk to an environment in a Scalable [Interface]Infrastructure system, the apparatus comprising:

means for lurking to the environment; and

means for inquiring as to the availability of the environment.